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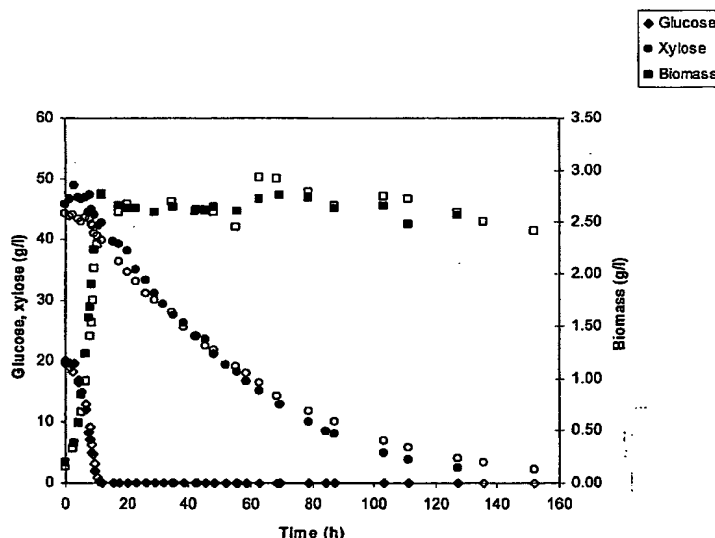
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(54) Title: METABOLICALLY ENGINEERED MICRO-ORGANISMS HAVING REDUCED PRODUCTION OF UNDESIRED METABOLIC PRODUCTS



(57) Abstract: A metabolically engineered micro-organism has an operative first metabolic pathway in which a first metabolite is transformed into a second metabolite in a reaction in which NAD is a cofactor for a first enzyme, suitably a phosphorylating dehydrogenase, said reaction step producing NADH. Said second metabolite is transformed into at least one further metabolite in a reaction catalysed by a second enzyme, suitably a kinase. The organism has an operative second metabolic pathway characterised by an enzyme activity in excess of a native level in respect of a third enzyme, suitably a non-phosphorylating dehydrogenase, e.g. GAPN, catalysing a non-reversible reaction in which NADP is a cofactor and NADPH is a product. Said first metabolite is transformed into a said further metabolite without the involvement of said second enzyme.



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